

**REMARKS:**

Claims 1 and 31 have been amended. New claims 49-54 have been added to define further embodiments of the invention. No new matter has been added.

Response to rejections under 35 U.S.C. §112

Claims 25-29 and 31-36 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner asserts that the term “the active ingredient” in claim 25 does not have antecedent basis in claim 1. Applicants submit that, as amended, claim 1 now provides antecedent basis for the term “the active ingredient”. Support for this amendment can be found on page 10, lines 6-9 of the specification.

With regard to claim 31, the Examiner asserts that the term “such as” is indefinite. Applicants submit that claim 31 has been amended to delete the phrases starting with the term “such as”, thereby obviating the rejection.

Therefore, in view of the above amendments, Applicants submit that claims 25-29 and 31-36 are now definite. Thus, Applicants respectfully request that the rejections under 35 U.S.C. §112, second paragraph, be withdrawn.

Response to rejections under 35 U.S.C. §103

Claims 1-11, 14-29, and 38 were rejected under 35 U.S.C. §103(a) as being obvious over Singh et al. (U.S. 6,428,772), Singh and Roberts (JPET 268:144-151, 1993), Hong et al. (WO99/39713), Obata et al. (Int. J. Pharm. 1993), and Loffler et al. (Household and Personal Products Industry, 2002). The Examiner asserts that Singh mentions the FDA's approval of salicylic acid in concentrations of 0.5 to 2% by weight

for treatment of acne, that Singh discloses such compositions in the form of a gel, lotion, cream, or solution (col. 1, lines 16-19), and that Singh discloses that salicylic acid is sparingly soluble in water (col. 1, line 21). Further, the Examiner asserts that Singh and Roberts discloses that NSAIDs such as salicylic acid, diclofenac, and piroxicam show low skin permeability when topically applied (pages 148-150, Figures 3-5). The Examiner asserts that Hong discloses a hydroalcoholic gel composition which can decrease the external loss of piroxicam and increase permeation of piroxicam through the skin when compared with a conventional hydrogel preparation (abstract). With regard to diclofenac, the Examiner asserts that Obata discloses that ethanol enhances skin permeation of NSAIDs by attacking the dense barrier structure of the skin (abstract). Thus, the Examiner asserts that the combination of these references would make it obvious to one of ordinary skill to use salicylic acid in a hydroalcoholic gel dispersion in order to overcome the compound's low permeability.

The Examiner acknowledges that Hong does not disclose that the hydroalcoholic gel dispersion comprises Aristoflex AVC as the gelling agent, but asserts that Loffler disclose Aristoflex as a gelling agent useful in hydroalcoholic gel dispersions suitable for cosmetics (paragraphs 4, 6, and 9).

Applicants submit that the incremental leaps taken to bridge the gaps between the subject matter of each of the references is a propagation of hindsight that was improperly used to collect the five cited references. It would have been unobvious to one skilled in the art of cosmetic skincare formulations to combine these five references

to arrive at the presently claimed invention for the below reasons. Moreover, even if one of skill in the art were to collect all of these varied references and try to combine their teachings, the combination of these references would not have motivated her to create the presently claimed composition.

Accordingly, Applicants submit that Singh discloses that alcohol can irritate the skin and it would be preferable to formulate an acne treatment composition without alcohol (see col. 2, lines 21-24). Therefore, Singh teaches away from using alcohol in acne skincare compositions. Clearly, one of skill in the art would have lacked any motivation to formulate a composition comprising salicylic acid and alcohol after reading Singh. In fact, one of skill in the art would have been motivated to exclude alcohol from acne treatment compositions.

Singh and Roberts is a study of the permeation of various NSAIDs through skin and into the tissues. This study does not disclose or suggest the use of any agents to increase or decrease permeation. Further, Singh and Roberts does not disclose or suggest that any agent that would increase the permeation of piroxicam through the skin would also increase the permeability of salicylic acid. In fact, Singh and Roberts demonstrate that there is poor predictability of the permeability of various compounds based on inherent differences in tissue affinities, non-linearities in tissue binding, variations in plasma protein binding, dermis-water partitioning, tissue-plasma partitioning, possible drug effects on membrane or blood flow, and tissue-tissue clearances (see page 150, right column, 2<sup>nd</sup> full paragraph). Thus, after reading Singh

and Roberts, it would not be obvious to one of ordinary skill that an agent that increases the permeability of a certain drug (piroxicam) would similarly affect the permeability of salicylic acid. Therefore, Applicants submit that Singh and Roberts does not provide any suggestion or motivation to take the next leap that the Examiner has taken, which is to investigate how to increase permeability of piroxicam and diclofenac, to find out how to increase the permeability of salicylic acid.

Hong discloses that the combination of piroxicam with, among several other essential ingredients, a gelling agent comprising HPC results in specifically advantageous effects when compared with other gels. There is no teaching or suggestion in Hong that would motivate one of ordinary skill to discard the inventive and optimized composition of Hong, and to replace it with the gelling agent of Loffler. Moreover, there is no mention of salicylic acid in Hong. Thus, if one of ordinary skill in the art was seeking to solve the problem of low permeability of salicylic acid, it would be unobvious to read a reference directed to piroxicam in hopes of solving this problem. However, even if one were to combine the Singh and Roberts reference with the Hong reference, she would only arrive at the Hong composition wherein piroxicam was replaced with salicylic acid. There is no motivation after reading Hong to take the Examiner's next leap, which is to discard the optimized formulation of Hong, and to replace it with the presently claimed ingredients. In fact, doing so would destroy the inventive function that Hong purports to have achieved.

Obata studies the permeation of drugs, specifically diclofenac (DF), through the skin and finds that a large amount of ethanol is able to increase the permeation of DF by affecting the barrier structure of skin (see abstract). Diclofenac (DF) is a drug used to reduce inflammation and as an analgesic reducing pain in conditions such as arthritis. Obata is directed to maximizing permeation of drugs through skin without regard for or mention of the irritant effects of ethanol. While it may be advantageous to use “a large amount of ethanol” to increase the permeability of drugs through the lipid pathway by affecting the dense barrier structure (see page 198, left column, last 9 lines of Obata) for example by applying such a composition to an arm or a leg, this disclosure in no way makes it obvious to one seeking to create a cosmetically acceptable skincare composition to use the same technique. This combination is improper because the method of Obata comprises a large amount of ethanol and Singh discloses that ethanol is a skin irritant. Thus, after reading Singh, one of ordinary skill in the art in the field of cosmetic skincare would not have been motivated to use large amounts of ethanol, as suggested by Obata, for cosmetic skincare purposes. Moreover, Obata does not motivate one of skill in the art to use the specific gelling agent of Loffler because it does not relate to gel formulations or to skincare.

There is clearly a disconnect between the cited references because references that are not at all related to cosmetic skincare compositions and also are not related to the same active ingredient. Thus, it is improperly alleged that one of ordinary skill in the art of cosmetic skincare seeking to formulate a suitable composition comprising salicylic acid as an active ingredient, would have collected references which relate to other

drugs for other purposes, including anti-arthritis. Clearly one seeking to increase permeability of a drug by using large amounts of alcohol, which is known to dry the skin, would not have been concerned with cosmetic skincare issues. Furthermore, the Examiner has modified several of the references in a manner that would be unnatural and unobvious to one of ordinary skill in the art. For example, there would have been no motivation to throw out the essential ingredients of Hong in favor of the presently claimed ingredients. The above-outlined description of the cited art references and the leaps taken between them are indicative of the use of improper hindsight. Therefore, based on the above reasoning, Applicants submit that the combination of references is improper and respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn.

With regard to claims 7-11, the Examiner asserts that Loffler discloses using the gelling agent in an amount of 0.5 to 1.0% which would render the claims obvious. With regard to claims 14-16, the Examiner asserts that Hong discloses hydroalcoholic gels comprising in excess of 38% w/w water (page 17, Example 8). The Examiner contends that it would have been customary for one of skill in the art to vary the amount of water in the formulation. With regard to claims 17-24, the Examiner asserts that Hong discloses a hydroalcoholic gel comprising 40-60% by weight of lower alkanol having from one to four carbon atoms (abstract) and specific embodiments comprising ethanol (pages 11-14, Examples 1-6 and pages 17-18, examples 8-18). With regard to claim 38, the Examiner asserts that Hong discloses that water-soluble polymers are not proper materials to be used in hydroalcoholic gels compositions because they lose their

viscosity or become cloudy (page 5, lines 14-17). The Examiner alleges that this disclosure renders obvious the use of a transparent gel as recited in claim 38. Applicants submit that claim 1 is believed to be allowable for the above reasons, therefore claims 7-11, which depend from claim 1 should be allowable for at least the same reasons.

Claims 30-37 have been rejected under 35 U.S.C. §103(a) as being obvious over Singh. Singh and Roberts, Hong, Obata, Loffler, in view of Murad et al. (U.S. 2002/0172719). The Examiner asserts that Murad discloses compositions for treatment of acne comprising hydrogen peroxide (abstract), in particular 0.01 to 6 weight percent (paragraph [0024]) Applicants submit that claim 1 is believed to be allowable for the above reasons, therefore claims 30-37, which depend from claim 1 should be allowable for at least the same reasons.

#### New Claims

Claims 49-52 have been added to recite dependent claims directed to subject matter that was deleted from claim 31.

Claims 53-54 have been added to define further embodiments of the invention. Support for these claims can be found on page 8, lines 4-8 of the specification. Applicants submit that compositions having these limitations are not disclosed or suggested by any combination of the cited references.

#### Conclusions

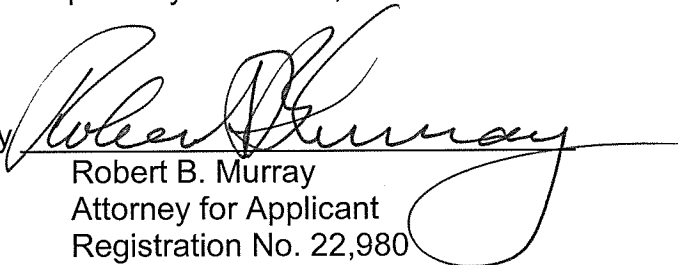
In view of the above amendments and remarks hereto, Applicants believe that all of the Examiner's rejections set forth in the March 4, 2009 Office Action have been fully overcome and that the present claims fully satisfy the patent statutes. Applicants, therefore, believe that the application is in condition for allowance.

The Director is authorized to charge any fees or overpayment to Deposit Account No. 02-2135.

The Examiner is invited to telephone the undersigned if it is deemed to expedite allowance of the application.

Respectfully submitted,

By

A handwritten signature in black ink, appearing to read "Robert B. Murray", is written over a horizontal line. The signature is fluid and cursive.

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